Burkholderia Cepacia Selective Agar

Intended use
Burkhloderia Cepacia Selective Agar is a medium used for isolation of *Burkholderia cepacia* from the respiratory secretion of patients with cystic fibrosis and other non-clinical specimens.

Summary
Burkhloderia cepacia Selective Agar is an opportunistic human pathogen that most often causes pneumonia in immunocompromised individuals with underlying lung disease (Such as cystic fibrosis or chronic granulomatous disease). *B. cepacia* is difficult to isolate on routinely used laboratory media like MacConkey Agar, since *B. cepacia* is a slow grower and therefore it is usually outgrown by the faster growing *Escherichia coli, Staphylococcus aureus,* and *Pseudomonas aeruginosa*. Burkhloderia Cepacia Selective Agar is based on PC medium, which was originally devised by Gilligan. This medium was found to be superior to MacConkey Agar for growth of *B. cepacia*. The medium is made selective for *B. cepacia* by the incorporation of bile salts, crystal violet and antibiotics. The antibiotics included are Polymyxin B, Gentamycin, Vancomycin in the form of freeze-dried supplement.

Principle
Casein Peptone and yeast extract in the medium provide nitrogenous, vitamin B source and other essential nutrients. Crystal violet, vancomycin, polymyxin B and gentamycin is used as selective agents, which inhibit organisms commonly found in respiratory secretions other than *B. cepacian* complex. Sucrose and Lactose are carbohydrates for enrichment and differentiation with phenol red as a pH indicator (changes colour from pink orange to pink red in alkaline pH).

Formula*

Ingredients	**g/L**
Casein Peptone	10.0
Lactose	10.0
Sucrose	10.0
Sodium Chloride	5.0
Yeast Extract	1.5
Phenol Red	0.08
Crystal Violet	0.002
Gentamicin	0.010
Vancomycin	0.0025
Polymyxin B	600000 units
Agar	14.0
Final pH (at 25°C)	7.0 ± 0.1

*Adjusted to suit performance parameters.

Storage and Stability
Store below 8°C in tightly closed container, preferably in dessicators and use freshly prepared medium. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of Specimen
Clinical samples; Respiratory secretions

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.
The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding

Directions

1. Suspend 50.60 g of the powder in 1000 mL purified / distilled water.
2. Heat to boiling to dissolve the powder completely.
3. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.
4. Cool to 45°C-50°C. Mix well and pour in sterile petridishes.

Quality Control

Dehydrated Appearance: Light yellow to pink coloured, homogeneous free flowing powder.
Prepared Appearance: Reddish orange coloured, clear to slightly opalescent gel forms in petridishes.
Cultural Response: Cultural characteristics observed after an incubation at 30°C -35°C for 18-72 hours.

Organism (ATCC)	**Growth**
Growth Promoting	
Burkholderia cepacia (25416)	Good
Burkholderia cenocepacia (25608)	Good
Burkholderia cenocepacia (BAA-245)	Good
Burkholderia multivorans (BAA-247)	Good
Inhibitory	
Pseudomonas aeruginosa (9027)	Inhibited
Staphylococcus aureus subsp. *aureus* (6538)	Inhibited

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Use and Disposal of Dehydrated Media

Inoculation of culture media with bacteria, deliberately and accidentally, leads to a very great number of organisms being produced. High concentrations of any organisms are potentially hazardous and must be disposed off safely. Therefore, after use, prepared plates, samples, sample containers or other contaminated material must be sterilized or incinerated before discarding. All autoclaved biohazards should be disposed off in accordance with state and local environmental regulations.
Only qualified personnel who have been trained in microbiological procedures should handle all infected specimens and inoculated culture media. User should ensure that any machinery or apparatus used and by chance contaminated must be safely disinfected or sterilized. The environment in which microbiological cultures are handled must also be considered.

Warranty

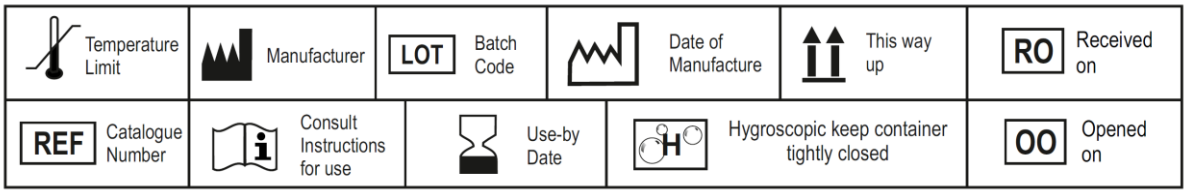
This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

References

1. Whitby P. W., 1998, J. Clin. Microbiol., 36:1642 1645 '
2. Gilligar, Gage, Bradshaw, schidlow and Deciscco, 1985, J. Clin. Microbiol., 22:5.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
4. Jorgensen, J.H., Pfaller , M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
5. Data on file: Microxpress®, A division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201020980500	Dehydrated Culture Media	500 g



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Disclaimer

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.